

Claims

- [1] An apparatus for manufacturing ceramic ware, the apparatus comprising:
a first mold housing and a second mold housing, each of which includes a housing frame, a wire net formed in the housing frame so as to support a mold, an air ejection tube fixed to the wire net and formed of fibroid material so as to eject the air toward the inside of the mold, and an air supply hole formed in the housing frame and connected to the air ejection tube so as to supply the air;
a first support means for fixedly supporting the first mold housing;
a second support means for fixedly supporting the second mold housing;
a first drive means for moving up and down the first support means;
a second drive means for moving back and forth the second support means;
an air supply means for providing the air to the air supply holes of the first and second mold housings; and
a control means for regulating the amount of the air, the air supply time, and the pressing intensity between the first and second mold housings.
- [2] The apparatus of claim 1, wherein each drive means is a hydraulic cylinder, and wherein the wire net of each mold housing is located at a distance of about 2~3 centimeters from the upper face of the housing frame.
- [3] A method for manufacturing ceramic ware using the apparatus of claim 1, the method comprising:
a step of preparing a lump of clay, wherein the clay is kneaded such that air bubbles are removed from the clay;
a step of cutting the clay such that the clay is divided into slab clays of a suitable size for the mold housing;
a step of inserting the slab clay into the mold housing;
a step of pressing and casting the slab clay into a desired clay piece;
a step of drying the clay piece;
a step of decorating the clay piece, wherein the clay piece is engraved with a pattern, and wherein glaze material is applied to the clay piece; and
a step of firing the clay piece.
- [4] The method of claim 3, further comprising:
a step of fabricating prototype clay from suitable clay;
a step of placing the overturned mold housing on the prototype clay;
a step of pouring gypsum sludge into the mold housing;
a step of supplying the air so as to produce voids in a gypsum mold, while the gypsum sludge is solidified into the gypsum mold; and
a step of removing the prototype clay from the gypsum mold.

- [5] The method of claim 4, wherein the slab clay, inserted into the mold housing, has room temperature and moisture content of 15~20 weight percent.
- [6] The method of claim 4, wherein the step of pressing and casting includes continuously supplying the air.
- [7] The method of claim 4, wherein the pressing time in the step of pressing and casting is set to 1~2 seconds.